

through varied forms of transformations of energy, upon the solar light and heat. Regarding then the established power of the nervous condition upon the feelings, the effect of external influences upon this physical state, and remembering that the feelings constitute the prime mover of our actions (the intellect being merely the discerner of the end which the feelings desire to grasp, and the deviser of the modes of reaching it), it would appear that the abnormal and periodic convulsions in the sun and his intermediate stages of quiescence are most likely to produce a corresponding modification of the nervous system and emotions of man, with relevant courses and intensities of activity, which find their successive expression in the circular variations of trade and finance.

Mr. E. A. Proctor has stated that Jevons placed the occurrence of commercial crises near to the period when solar spots were least in dimensions and fewest in number. *I* cannot discover such a proposition in any of the writings of the Professor, and, as Prof. Eoxwell has noted, the contention of Jevons was simply the coincidence of the period of crises (as a phase in the regular cycle of trading features) with, the term which comprehended a sunspot circuit. *I* do not think that observations are yet sufficiently mature and minute to determine the question whether crises concur with a maximum or a minimum stage of maculation. I should be disposed, on the whole, on various grounds to attach weight to the former view, when—in addition to reasonable conjectures upon the causes of crises as the expression of feelings conjoined with physical conditions—we find, for example, that prominent crises occurred in the years 1805, 1815, 1825, 1836-9 (in America in 1837), 1847 and 1857, while sunspot maxima were attained in 1804-5, 1816, 1827-8, 1837-8, 1848-9 and 1860. But, as I have already remarked (while the synchronism of the two cycles has been fully established), the relation between any particular phase of trade and the coincident condition of solar activity is one which, fruitful of promise, demands extended observation, and, especially, analysis of the character of each crisis.

The essential point, I repeat, is, not the incidence of a crisis with a maximum or a minimum of spots (which has not yet been determined), but the definitely-founded